



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.       |
|---|-------------|----------------------|---------------------------------|------------------------|
| 10/534,365  | 12/05/2005  | Stefan Virtanen      | 1515-1034                       | 4900                   |
| 466   | 7590        | 05/18/2007           |                                 |                        |
| YOUNG & THOMPSON<br>745 SOUTH 23RD STREET<br>2ND FLOOR<br>ARLINGTON, VA 22202 |             |                      | EXAMINER<br>COLLINS, GIOVANNA M |                        |
|   |             |                      | ART UNIT<br>3672                | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>05/18/2007         | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |  |   |  |
|------------------------------|--|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/534,365   | <b>Applicant(s)</b><br>VIRTANEN, STEFAN |  |
|                              | <b>Examiner</b><br>Giovanna M. Collins | <b>Art Unit</b><br>3672                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input checked="" type="checkbox"/> Other: _____               |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1 and 4 are objected to because of the following informalities:

In claim 1, line 12, the phrase " at one drill button" should be changed to - - at least one drill button - - .

In claim 1, in line 21, and claim 4, line 3, the word "equidistantly" should be changed to - - at the same distance- - .

In claim 1, line 23, the phrase "as the at least one drill button (16) in each of the others of said at least three conical segments (18)" should be removed and rewritten. This phrase is confusing and does not help to further define the invention.

It is unclear what the phrase "plural drill buttons (16)" in line 24 is referring to. As the applicant has referred to several drill buttons in the claim. It is unclear exactly which drill buttons the applicant is referring to in this phrase.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 3672

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Brandenburg et al. 6799648.

As best understood by the examiner, referring to claim 1, Brandenburg discloses ( see marked up fig. 1 attached to office action) a reamer assembly including a shank(16) for attachment of the reamer to the end of a down-the-hole hammer drill and a conical drill bit or crown (at 10), characterized in that the conical bit (15) of the reamer is divided into at least three conical segments (see marked up fig. 1, sections at, a,b and c with conical sections where outer insert 30 at located) which are terminated with a transverse end surface ( at 25a) which directly connects said conical segments, and in that at least three of the include drill buttons (30a-f) where at one drill button (30a) in each of said at least three segments (18) is disposed equidistantly from the centre axis of the drill bit as the at least one drill button (30c and 30e) in each of the other of said at least three conical segments (18), each of said conical segments (18) having plural drill buttons (30b,30d, 30 f and 22a-c)) disposed at different distances from the center axis of the drill bit .

Referring to claim 3, Brandenburg discloses the drill buttons (30a-f and 22a-c) are placed mutually in the same pattern in each of the segments.

Referring to claim 4 and 7, Brandenburg discloses a plurality of drill buttons (30a-b, in segment a, 30c-d, in segment b, 30e-f, in segment c) are disposed at the same distance from the center of the drill bit.

Referring to claim 5, Brandenburg discloses the drill buttons (30e-f and 22a-c) lie close to each other in a common plane projection (see fig. 2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandenburg '648.

Brandenburg discloses a drill button (see marked up fig. 1, at 25a) in the transverse end section but does not disclose a plurality of drill buttons. However, in different embodiments Brandenburg discloses a plurality of drill buttons in a transverse end section. Furthermore, duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to modify the assembly disclosed by Brandenburg to have a plurality of drill buttons on the transverse end because duplicating the components of a prior art device is a design consideration within the skill of the art.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

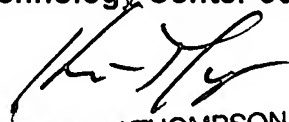
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*gmc*  
gmc

**David Bagnell**  
**Supervisory Patent Examiner**  
**Technology Center 3670**

  
**KENNETH THOMPSON**  
**PRIMARY EXAMINER**  
**TECHNOLOGY CENTER 3600**

